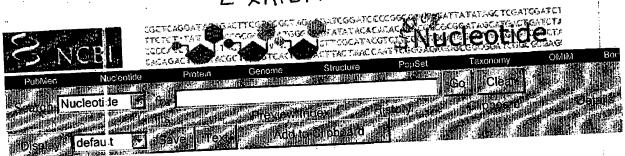
NCBI Sequence '/iewer

Exhibit 1



□ 1. NM_001400 Homo sapiens endo... [gi:\(3027635]

Related Sequences, OMIM, Protein, PubMed, Taxonomy, UniSTS, LinkOut

PRI 16-FEB-2001 linear mRNA 2753 bp Homo sapiens endothelial differentiation, sphingolipid LOCUS

G protein-coupled receptor, 1 (EDG1), mRNA. DEFINITION

NII_001400 ACCESSION

NI_001400.2 GI:13027635 VERSION

KEYWORDS

human. SOURCE

ORGANISM

Enkaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Homo sapiens

M.mmalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 2753) REFERENCE

AUTHORS

An abundant transcript induced in differentiating human endothelial TITLE

colls encodes a polypeptide with structural similarities to

G protein-coupled receptors

J Biol. Chem. 265 (16), 9308-9313 (1990) JOURNAL

9 1264425 MEDLINE

REFERENCE

A1,S., Bleu,T., Huang,W., Hallmark,O.G., Coughlin,S.R. and AUTHORS

I lentification of cDNAs encoding two G protein-coupled receptors Goetzl, E.J. TITLE

for lysosphingolipids

FRBS Lett. 417 (3), 279-282 (1997) JOURNAL

9 1072391 MEDLINE

(bases 1 to 2753)

Lee, M.J., Van Brocklyn, J.R., Thangada, S., Liu, C.H., Hand, A.R., REFERENCE **AUTHORS**

Manzeleev, R., Spiegel, S. and Hla, T.

Sphingosine-1-phosphate as a ligand for the G protein-coupled TITLE

receptor EDG-1

S:ience 279 (5356), 1552-1555 (1998) JOURNAL

RIVIEWED REFSEQ: This record has been curated by NCBI staff. The MEDLINE COMMENT

reference sequence was derived from AF233365.1, M31210.1.

On Feb 21, 2001 this sequence version replaced gi:4503454.

Summary: The protein encoded by this gene is structurally similar

to G protein-coupled receptors and is highly expressed in

endothelial cells. It binds the ligand sphingosine-1-phosphate

with high affinity and high specificity, and suggested to be involved in the processes that regulate the differentiation of endothelial cells. Activation of this receptor induces cell-cell

a lhesion.

COMPLETENESS: complete on the 3' end.

FEATURES

Location/Qualifiers

1..2753 source

/organism="Homo sapiens" /db_xref="taxon:9606"

NCBI Sequence Viewer

```
/chromosome="1"
                        /map="1p21"
                        1..2753
       gene
                        /gene="EDG1"
                        /note="ECGF1; CHEDG1"
                        /db_xref="LocusID: 1901"
                        /db_xref="MIM:601974"
                        244..1392
        CDS
                        /gene="EDG1"
                        /note="edg-1; sphingosine 1-phosphate receptor EDG1"
                        /codon_start=1
                        /db_xref="LocusID: 1901"
                         /db_xref="MIM:601974"
                         /product="endothelial differentiation, sphingolipid
                        G-protein-coupled receptor, 1"
                         /protein_id="NP_001391.2"
                         /db_xref="GI:13027636"
                         /	ext{translation} = 	ext{"MGPTSVPLVKAHRSSVSDYVNYDIIVRHYNYTGKLNISADKENS}
                         IKLTSVVFILICCFIILENIFVLLTIWKTKKFHRPMYYFIGNLALSDLLAGVAYTANL
                         LLSGATTYKLTPAQWFLREGSMFVALSASVFSLLAIAIERYITMLKMKLHNGSNNFRL
                         FLLISACWVISLILGGLPIMGWNCISALSSCSTVLPLYHKHYILFCTTVFTLLLLSIV
                         ILYCRIYSLVRTRSRRLTFRKNISKASRSSEKSLALLKTVIIVLSVFIACWAPLFILL
                         LLDVGCKVKTCDILFRAEYFLVLAVLNSGTNPIIYTLTNKEMRRAFIRIMSCCKCPSG
                         DSAGKFKRPIIAGMEFSRSKSDNSSHPQKDEGDNPETIMSSGNVNSSS"
                         /note="7tm_1; Region: 7 transmembrane receptor (rhodopsin
         misc feacure
                          family)"
                          /note="7tm_1; Region: 7 transmembrane receptor (rhodopsin-
         misc fea ure
                          family)"
                          2313
         <u>variatio</u>ı
                          /allele="C"
                          /allele="G"
                          /db_xref="dbSNP: 1056840"
                          2587..2592
          polyA si mal
                          2733..2738
          polyA si mal
                                                 759 t
                                       619 g
                              707 C
                     668 a
    BASE COUNT
             1 gtc jggggca gcagcaagat gcgaagcgag ccgtacagat cccgggctct ccgaacgcaa
     ORIGIN
            61 ctt gccctg cttgagcgag gctgcggttt ccgaggccct ctccagccaa ggaaaagta
           121 cac laaaage etggateact categaacea eccetgaage cagtgaagge tetetegeet
           181 cgc:ctctag cgttcgtctg gagtagcgcc accccggctt cctggggaca cagggttggc
           241 accatogggc ccaccagegt cccgctggte aaggeccace gcageteggt etetgaetae
           301 gtc lactatg atateategt ceggeattae aactacaegg gaaagetgaa tateagegeg
           361 gac laggaga acagcattaa actgacctcg gtggtgttca ttctcatctg ctgctttatc
initiation
           421 atc:tggaga acatetttgt ettgetgaec atttggaaaa ccaagaaatt ccaecgaece
           481 atg:actatt ttattggcaa tctggccctc tcagacctgt tggcaggagt agcctacaca
           541 gct lacetge tettgtetgg ggccaccace tacaagetca etecegecca gtggtttetg
           601 cgg jaaggga gtatgtttgt ggccctgtca gcctccgtgt tcagtctcct cgccatcgcc
           661 att jageget atateacaat getgaaaatg aaacteeaca aegggageaa taaetteege
           721 ctc:tcctgc taatcagcgc ctgctgggtc atctccctca tcctgggtgg cctgcctatc
           781 atg gctgga actgcatcag tgcgctgtcc agctgctcca ccgtgctgcc gctctaccac
           841 aag actata teetettetg caccaeggte tteactetge ttetgetete categteatt
           901 ctg:actgca gaatctactc cttggtcagg actcggagcc gccgcctgac gttccgcaag
           961 aacitttcca aggccagccg cagctctgag aagtcgctgg cgctgctcaa gaccgtaatt
           1021 atc tcctga gegtetteat egectgetgg geacegetet teateetget eetgetggat
           1081 gtgjgctgca aggtgaagac ctgtgacatc ctcttcagag cggagtactt cctggtgtta
           1141 gct tgctca actccggcac caaccccatc atttacactc tgaccaacaa ggagatgcgt
           1201 cgg jeettea teeggateat gteetgetge aagtgeeega geggagaete tgetggeaaa
           1261 ttc:agcgac ccatcatcgc cggcatggaa ttcagccgca gcaaatcgga caattcctcc
```

NCBI Sequence Viewer

```
1321 cacceccaga aagacgaagg ggacaaccca gagaccatta tgtcttctgg aaacgtcaac
   1381 tettetteet agaactggaa getgtecace caceggaage getetttaet tggtegetgg
 1441 ccaceccagt gtttggaaaa aaatetetgg gettegaetg etgeeaggga ggagetgetg
   1501 caacccagag ggaggaaggg ggagaatacg aacagcctgg tggtgtcggg tgttggtggg
   1561 tagagttagt teetgtgaac aatgeactgg gaagggtgga gatcaggtee eggeetggaa
   1621 tatatattet accecetgg agetttgatt ttgcactgag ccaaaggtet ageattgtca
   1681 agetectaaa gggtteattt ggeeeeteet caaagactaa tgteeeeatg tgaaagegte
   1741 tetttgtetg gagetttgag gagatgtttt cetteaettt agtttcaaac ccaagtgagt
   1801 gtgtgcactt ctgcttcttt agggatgccc tgtacatccc acaccccacc ctcccttccc
   1861 ttc: tacccc tectcaacgt tettttactt tatactttaa ctacctgaga gttatcagag
   1921 ctg@ggttgt ggaatgatcg atcatctata gcaaataggc tatgttgagt acgtaggctg
   1981 tgg@aagatg aagatggttt ggaggtgtaa aacaatgtcc ttcgctgagg ccaaagtttc
    2041 catctaagcg ggatccgttt tttggaattt ggttgaagtc actttgattt ctttaaaaaa
    2101 catcitttca atgaaatgtg ttaccatttc atatccattg aagccgaaat ctgcataagg
    2161 aagcccactt tatctaaatg atattagcca ggatccttgg tgtcctagga gaaacagaca
    2221 agc: aaacaa agtgaaaacc gaatggatta acttttgcaa accaagggag atttcttagc
    2281 aaai:gagtet aacaaatatg acateegtet tteccaettt tgttgatgtt tatttcagaa
    2341 toti:gtgtga ttcatttcaa gcaacaacat gttgtatttt gttgtgttaa aagtactttt
    2401 ctt: atttt gaatgtattt gtttcaggaa gaagtcattt tatggatttt tctaacccgt
    2461 gttmactttt ctagaateca ecetettgtg ccettaagea ttactttaac tggtagggaa
    2521 cgc:agaact tttaagtcca gctattcatt agatagtaat tgaagatatg tataaatatt
    2581 acanagaata aaaatatatt actgtctctt tagtatggtt ttcagtgcaa ttaaaccgag
    2641 aga :gtcttg tttttttaaa aagaatagta tttaataggt ttctgacttt tgtggatcat
    2701 ttt cacata getttateaa ettttaaaca ttaataaact gatttttta aag
//
```

Revised: October 24, 2001.

<u>Disclaimer | Write to the Help Desk</u> <u>NCBI | NLM | NIH</u>